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(21)Application number : 09-312349

(71)Applicant : TOSHIBA CORP

(22)Date of filing : 13.11.1997

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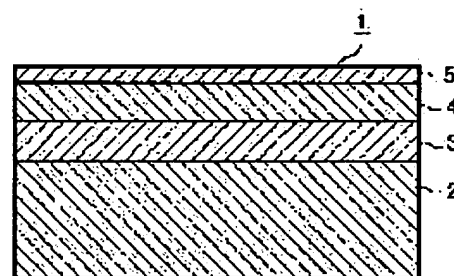
ITO SHINICHI

(54) IMAGE RECORDING MEDIUM AND METHOD FOR RECORDING IMAGE

(57)Abstract:

PROBLEM TO BE SOLVED: To reduce in size an apparatus by forming first and second recording layers reversibly changing in color erasing and color developing states according to a difference of heating energy on a base material, and partly duplicating a heating energy for color developing the second layer and a heating energy for color erasing the first layer, thereby enhancing a falsification preventing effect of an image.

SOLUTION: A first reversible thermal recording layer 3, a second reversible thermal recording layer 4 and a protective layer 5 are sequentially laminated and formed on a surface of a plate-like base material 2. The layers 3, 4 contain a dye agent and a color developing and reducing agent and change in color developing state and erasing state according to a difference of applied heating energies. The energy is larger in the case of color developing than that in the case of color erasing the layer 4. At least parts of the energy for color developing the layer 4 and the energy for color erasing the layer 3 are duplicated. And, the energy for color developing the layer 3 is constituted to be larger than that for color erasing it. Thus, recording and heating the first and second recording layers are selectively and simultaneously conducted in response to a recording image.



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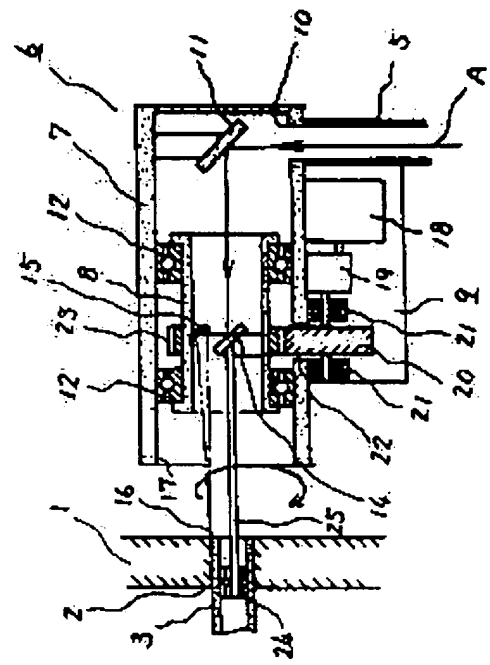
(21)Application number : 54-119377 (71)Applicant : HITACHI LTD
(22)Date of filing : 19.09.1979 (72)Inventor : ISOBE SHOJI

(54) LASER WELDING DEVICE

(57)Abstract:

PURPOSE: To ensure a simple welding with a high working efficiency, by giving a circular rotation to the focus of the laser beam.

CONSTITUTION: The laser beam produced from the laser oscillator enters the fixed frame 7 of the optical rotating device 6 through the light guide tube 5 and then folded by the reflector 11 to be transmitted to the concave mirror 15 after hitting the reflector 14. The laser beams are converged onto a spot of the weld zone 16 via the mirror 15 to cause a sharp and needlelike melting. On the other hand, the rotating force of the motor 18 gives rotations to the rotary barrel via the converter 19 plus gears 20 and 23 each. As a result, the mirror 15 turns round the center axis of the rotary barrel, and accordingly the laser beams reflected and converged by the mirror 15 have a circulation on the weld zone 16 to cause a circular melted area. As a result, an even welding is secured at the joining part between the tube plate 1 and tube 3.



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- [Date of request for examination]
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MULTICOLOR RECORDING MEDIUM

Patent number: JP59089192
Publication date: 1984-05-23
Inventor: ISHIDA KATSUHIKO; others: 02
Applicant: KANZAKI SEISHI KK
Classification:
- **international:** B41M5/18
- **european:**
Application number: JP19820199424 19821113
Priority number(s):

Also published as:

 US4529992 (A1)
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Abstract of JP59089192

PURPOSE: To provide a multicolor recording medium free from unrequired coloring of a recording layer and free from mixing of different color tones with each other, wherein a multicolor image is formed by intermediately providing substances which respectively absorb a plurality of infrared lights having different wavelengths.

CONSTITUTION: A plurality of color forming systems capable of forming different colors are constituted by a method wherein a substance exhibiting absorbency to recording infrared laser beam wavelengths in a range of 0.8-20μm but not exhibiting absorbency to other wavelengths (e.g., lead silicate) is incorporated into a recording layer consisting of, for example, a combination of a basic dye [for example, 3,3-bis(p-dimethylaminophenyl)-6-dimethylaminophthalide] and an acidic substance (for example, 4,4'-isopropylidenediphenol). By laminating the resultant material as a recording layer, the objective multicolor recording medium is obtained.

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